Report on the Effect the Low-Enriched Uranium
Delivered Under the HEU Agreement Between the
Government of the United States and the Government
of the Russian Federation has on the
Domestic Uranium Mining, Conversion, and
Enrichment Industries and the Operation of the
Gaseous Diffusion Plant

2004



Information Date: December 31, 2004

Introduction

The Agreement Between the Government of the United States and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons (HEU Agreement) was signed on February 18, 1993.

The HEU Agreement provides for the purchase over 20 years (1993–2013) of 500 metric tons (MT) of weapons-origin highly enriched uranium (HEU) converted to commercial grade low-enriched uranium (LEU) from the Russian Federation (Russia). The Russian LEU is sold in the United States (U.S.) nuclear fuel market to commercial nuclear power plants. The LEU, in the form of enriched uranium hexafluoride (UF₆), resulting from the HEU Agreement amounts to the equivalent of almost 400 million pounds of natural uranium concentrates as U₃O₈, about 150 million kilograms of uranium (kgU) conversion services, and approximately 92 million separative work units (SWU) of uranium enrichment services. This is enough fuel to satisfy about eight years of domestic demand for uranium concentrates, conversion services, and enrichment services.

The HEU Agreement is a key element of U.S. nonproliferation policy and serves mutual U.S. and Russian interests. The HEU Agreement provides incentives for Russia to take fissile material in the form of HEU from its nuclear warheads and blend it down into LEU for use and sale as fuel for commercial nuclear power plants. The revenue stream from the HEU Agreement helps provide an ongoing financial incentive for Russia to reduce its inventory of HEU derived from surplus nuclear weapons. It also provides a structured mechanism permitting the sale of Russian enrichment services and uranium into an otherwise restricted U.S. domestic market.

Purpose

The USEC Privatization Act (Privatization Act), Public Law 104-134 (42 U.S.C. 2297h) was enacted requiring the President to "report to the Congress not later than December 31 of each year on the effect the low-enriched uranium delivered under the HEU Agreement is having on the domestic uranium mining, conversion, and enrichment industries, and the operation of the gaseous diffusion plants."

Report Layout

This report includes a review of the (i) implementation and status of the HEU Agreement deliveries, (ii) events impacting the HEU Agreement, and (iii) the effect of the HEU Agreement on domestic nuclear fuel markets. The report also provides a description of government actions taken to prevent or mitigate any adverse impact on such companies or any loss of employment at the gaseous diffusion plants as a result of the HEU Agreement. Previous reports prepared by the U.S. Department of Energy (DOE) can be found at http://nuclear.gov/reports/reports-soon.html

Implementation of the HEU Agreement

A contract implementing the terms of the HEU Agreement was signed on January 14, 1994, with USEC Inc.'s subsidiary, the United States Enrichment Corporation, acting as the executive agent on behalf of the U.S. Government, and Techsnabexport (Tenex) for the Russian Federation's Federal Atomic Energy Agency. The terms provide for the sale of the enrichment component of the LEU

resulting from the blended down HEU to USEC's customers. The contract also provides for the Russian Government to receive sales revenues from USEC's enrichment contracts using market-based pricing.

The 1999 Commercial Feed Agreement is the primary mechanism that provides revenue to Russia for the natural uranium and conversion components of the LEU delivered under the HEU Agreement. This Agreement established an allocation of the natural uranium and conversion among Tenex and Cameco, Cogema, and RWE Nukem (known as the Western Consortium) based upon the USEC Privatization Act Section 3112 quotas that restricted the annual amount of natural uranium allowed to be imported to the U.S. for domestic end use. Natural uranium hexafluoride (UF₆) not purchased by Tenex or the Western Consortium is then shipped to a Monitored Inventory in Russia. The Commercial Feed Agreement is very important to the overall success of the HEU Agreement.

Status of Deliveries

As of December 31, 2004, over 230 MTU of Russian HEU has been converted to LEU and delivered to the United States. To reach the total goal of 500 MTU of HEU, 30 MTU of deliveries are scheduled annually between 2005 and 2012. These deliveries, together with the undelivered 8.7 MTU from 1999 and a delivery of 20 MTU in 2013, will meet the 500 MTU goal.

Table 1 shows for each year the estimated number of Russian warheads that have been dismantled, HEU and LEU quantities as well as the equivalent natural uranium, conversion services, and enrichment components that have been delivered to date; and projected totals for the remaining life of the HEU Agreement.

Natural UF₆ Natural UF₆ Uranium Uranium **Estimated** Conversion Enrichment LEU HEU Concentrates **Contracted Year Dismantled** Services Services $(MT)^{(b)}$ Component (MT) Warheads^(a) Component Component (million lb. (million kgU) (million SWU) $U_3O_8(e)$ 1995 186.0 4.8 1.9 1.1 1996 12.0 370.9 9.5 3.7 2.2 1997 534 13.4 358.5 10.2 3.9 2.4 1998 764 19.1 571.5 15.0 5.8 3.5 1999 970 24.3 718.7 19.0 7.3 4.5 1,037.8 2000 1,462 36.6 28.3 10.9 6.7 2001 1,201 30.0 904.3 23.7 9.1 5.5 2002 1,201 30.0 879.0 23.5 9.0 5.5 2003 1,203 906.0 23.7 9.1 30.1 2004 891.0 23.6 9.1 1,202 30.1 5.5 Total Delivered Through 2004 9,261 231.5 6,823.8 181.4 69.8 42.6 Total Expected 15,258.6 395.8 152.2 92.1 20,000 500.0 over Life of Agreement

Table 1. Status of Deliveries Under the HEU Agreement

Notes:

⁽a) Based on IAEA's definition of significant quantities (1987 IAEA Safeguards Glossary).

b) The HEU Agreement allowed for up to 30 MTU of HEU to be blended down to LEU for delivery in 1999. However, only 21.3 MTU (14.7 MTU in CY 1999 and 6.6 MTU in CY 2000) of the 1999 order was actually delivered. The remaining 8.7 MTU of HEU will be scheduled for delivery in future years.

In recognition of the 10th anniversary of the Implementing Contract between USEC and Tenex in January 2004 and the 5th anniversary of the Commercial Feed Agreement in March 2004, the following highlighted section provides key events or milestones that have occurred during the historic agreement's implementation.

The HEU Agreement Milestones

- ➤ The HEU Agreement was signed on February 18, 1993.
- ➤ On January 14, 1994, USEC and Tenex, as Executive Agents for the United States and Russia, executed the Implementing Contract to the HEU Agreement.
- ➤ In June 1995, the first delivery of LEU that was derived from HEU arrived in the United States.
- ➤ On April 26, 1996, the USEC Privatization Act, P.L. 102-486, was signed by President Clinton. This Act, in part, established the annual amount of natural uranium that can be imported for sale within the United States.
- ➤ On October 21, 1998, President Clinton signed P.L. 105-277 that, in part, provided for the United States to purchase, for up to \$325 million, the unsold natural uranium associated with the 1997 and 1998 deliveries of Russian LEU.
- ➤ In March 1999, the Transfer Agreement was signed by the U.S. and Russian Governments. In addition, the Western Consortium and Tenex signed a Commercial Feed Agreement. These agreements were instrumental in introducing the natural uranium component into the market in a nondisruptive manner.
- ➤ In November 2001, the Western Consortium and Tenex signed an amendment to the Commercial Feed Agreement that exercised the Western Consortium's options to purchase the natural uranium for the period 2002 through 2013.
- ➤ On June 19, 2002, the U.S. and Russian Governments approved the latest amendment to the contract between USEC and Tenex that implements the HEU Agreement. Under this new amendment, a market-based pricing structure for the SWU is used for the remaining term of the HEU Agreement.
- ➤ On June 16, 2004, the Western Consortium and Russia announced an amendment to the Commercial Feed Agreement that ensures there is sufficient natural uranium in Russia to blend down the HEU to commercially usable LEU through the remaining term of the Agreement.
- ➤ In September 2004, the deliveries under the HEU Agreement reached the equivalent level of 9,000 nuclear warheads eliminated, meeting a significant nonproliferation milestone.

Events Impacting the HEU Agreement During 2004

In reviewing activities in the nuclear fuel markets during 2004, Tenex's decision to sever its ties to Globe Nuclear Supply Services (GNSS) and the amendment to the Commercial Feed Agreement are noted for their general impact on the commercial markets and, specifically, the HEU Agreement. These events are described below:

Tenex Decision to Sever Its Ties to GNSS

In November 2003, Tenex notified its U.S. agent GNSS that effective January 1, 2004, Tenex was terminating its sales contract of the natural uranium resulting from the HEU Agreement because "the terms of the contract with GNSS are contrary to the interests of the Russian Federation". GNSS has asked for arbitration of Tenex's decision in Sweden, and a hearing has been set for April 25 to May 4, 2005.

GNSS also asked the U.S. District Court in Maryland (District Court) for an injunction that would compel Tenex to continue to make deliveries to GNSS while the arbitration proceedings continue. The District Court heard arguments in the dispute in December 2003 but declined to provide immediate injunctive relief. The court found this to be an issue between the Russian Government and its agent; and thus, outside of U.S. law.

The U.S. Court of Appeals for the fourth circuit, on July 22, 2004, reversed the earlier ruling and remanded the case back to the District Court because it found that Tenex engaged in commercial activity and made it subject to the jurisdiction of the U.S. courts. However, on September 13, 2004, the District Court dismissed the request for an injunction on the basis that it was impossible to restore the *status quo* that existed when Tenex initially made their decision to no longer deliver to GNSS.

Amendment of the Commercial Feed Agreement

In June 2004, Russia and the Western Consortium announced an amendment to the Commercial Feed Agreement with Tenex that provides assurance that there is sufficient uranium in Russia for blending down the weapons-grade HEU to commercially usable LEU. This change was needed in light of Russia's rising requirements for uranium to fuel their expanding nuclear plant construction program within Russia and abroad.

The net market impact of the amendment is the reduction of about 74 million pounds of uranium and 28,000 MTU of conversion component that could have been made available to the non-U.S. commercial markets. The removal of 74 million pounds of uranium and conversion from the uranium and conversion markets may have an effect due to the reduction in supply in markets that are currently in supply/demand balance. Further, under the amended agreement, the Western Consortium also committed to purchase almost 163 million pounds of uranium from 2004 through 2013.

Effect of the HEU Agreement on Domestic Industries¹

The following sections discuss the supply and demand for the domestic uranium mining, conversion and enrichment markets as well as pricing. In characterizing the nuclear fuel markets in 2004, it is important to recognize that the uranium, conversion and enrichment markets have all experienced a fundamental shift in sources of supply. The shift results from a reduction in government and commercial inventory supply (commonly called secondary supplies) that is available to the market, causing prices to increase (primarily in the uranium and conversion markets). Without secondary supplies, the spot market was relatively quiet as buyers focused more on longer-term contracts. As a result of the price increases, producers are considering new capacity in all three markets, in order to meet future demand. During 2004 the trade press reported several companies' new exploration plans for uranium resources in a number of countries including the United States. The conversion suppliers are also contemplating expanded capacity, and two companies requested Nuclear Regulatory Commission licenses to build new enrichment capacity in the United States. Because demand is now encouraging new supply to enter the market, prices will reflect the actual costs of production as opposed to inventory sales prices. In order to better reflect this situation in commercial nuclear fuel markets, this report includes long-term market prices as well as spot prices.

Uranium Mining

World uranium demand during 2004 was estimated to be 173 million pounds U_3O_8 , which is about the same level as reported for 2003. World uranium production was estimated to be 105 million pounds U_3O_8 during 2004, an increase of 14 million pounds from the 2003 level of about 91 million pounds. Since current worldwide production supplies only about 60 percent of demand, additional supply from secondary market supplies such as government and commercial inventories, re-enriched uranium tails, and reprocessed uranium as well as the HEU Agreement natural uranium component, are needed to meet all uranium requirements.

U.S. demand in 2004 is estimated to be 56 million pounds U_3O_8 , which is about the same level as 2003. Domestic uranium production is equivalent to about 4 percent of the annual demand for uranium used in U.S. commercial nuclear power plants.

The long-term contract price for uranium at the end of 2004 was \$25 per pound U_3O_8 . Spot market prices began the year at \$14.50 per pound but increased to a twenty year high of \$20.70 per pound by the end of the year. The spot market volume, however, was limited to about 20 million pounds and accounted for only about 12 percent of total world consumption. With uranium supply and demand in closer balance and the reduced level of availability of secondary market supply, uranium production levels and supplier costs as well as demand will determine both future long term and spot market contract prices.

Since the initial implementation in March 1999 of the Commercial Feed Agreement, the measured sale of the uranium to the Western Consortium and Tenex has limited the effects of the HEU Agreement deliveries on the commercial markets. In fact, the HEU Agreement deliveries have now become an increasingly important source of supply to meet U.S. utility uranium requirements. Furthermore,

¹ Price and secondary market data provided in this section is sourced to The Ux Consulting Company, LLC, 2004. Uranium Production and demand information is sourced to ERI.

although the amount of natural uranium supplied from the HEU Agreement has increased in the past two years, the market price has continued to escalate. Because of declining supply availability from secondary sources, HEU Agreement deliveries have helped ensure adequate supply at reasonable prices.

Uranium Conversion Services

World demand for UF₆ conversion during 2004 was estimated to be 63 million kgU as UF₆, which is consistent with the demand level reported for 2003. U.S. demand for conversion services was estimated in 2004 to be 22 million kgU.

In 2004, world conversion production was estimated to be 40 million kgU, which is a decrease of about 6 million kilograms from 2003. The gap between production and demand during 2004 was made up from a combination of the conversion services equivalent feed component obtained from the HEU Agreement and other commercial inventories of UF₆.

The decline in production between 2004 and 2003 is the result of the shutdown of ConverDyn's conversion facility for an extended period of time. The ConverDyn conversion facility at Metropolis, Illinois was shutdown in December 2003 due to an accidental release of UF_6 gas off site. The Nuclear Regulatory Commission investigated and determined that the release had minimal impact on worker or public health and safety. However, restart of the facility was not permitted until early April 2004, which caused significant production shortfalls.

The plant shutdown also had an effect on the Commercial Feed Agreement implementation due to ConverDyn's inability to deliver UF₆ under the Tripartite Agreement (signed in 2001) by USEC, Tenex and ConverDyn that facilitated the delivery of the natural uranium component of the HEU Agreement material back to Russia from the ConverDyn facility. As a consequence, USEC made arrangements with Cameco to supply the UF₆ for return to Russia in 2004. This strategy, however, was not successful due to an unanticipated strike at Cameco's Port Hope conversion facility, which lasted from July 25 to September 17, 2004. The 2004 shipment of UF₆ to Russia was delayed to early 2005.

From a market perspective, the conversion component of the HEU Agreement is equivalent to almost 9,100 kgU per year of production capacity, which is comparable in size to any of the existing conversion production facilities. Since the USEC Privatization Act does not restrict the sab of Russian conversion services entering the United States, the unfettered introduction of the 9,100 KgU of conversion from HEU Agreement deliveries into the market initially impacted the conversion services market. However, with the already existing shortfall in production capacity and BNFL's plan to cease conversion operations after March 2006, the HEU Agreement has become an essential source of conversion supply.

During 2004, the spot market price of conversion increased from \$5.25 per kgU to \$9.00, which is an increase of over 71 percent. The spot market price of conversion services has grown by 300 percent since it bottomed out at \$2.25 per kgU in July 2000. The price rise is partially attributable to British Nuclear Fuels Limited plc (BNFL) decision to stop converting uranium in 2006 and, more importantly, the conversion market continued to experience tightness because of the shutdown of ConverDyn plant.

Uranium Enrichment Services

World demand for enrichment services during 2004 was estimated to be 41 million SWU, which is a slight increase from the 2003 level of 39 million SWU. World supply and demand for enrichment services, including the LEU resulting from the HEU Agreement, are in close balance.

Like 2003, U.S. demand during 2004 was estimated to be about 12 million SWU. USEC's Paducah Gaseous Diffusion Plant (GDP) is the single source of enrichment services production in the United States. Estimated U.S. production is between 5.0 and 5.5 million SWU per year or between 42 and 46 percent of domestic demand. The enrichment services component of the HEU Agreement is equivalent to 5.5 million SWU per year. Most of the HEU Agreement SWUs purchased by USEC are used to meet U.S. demand. In this respect, the HEU Agreement is likely to remain an essential source of supply through the remaining years of the Agreement.

Spot and long-term market prices for enrichment services have remained relatively constant in 2004. The spot price began the year at \$108 per SWU and increased slightly to \$110 per SWU. The long-term price at the end of 2004 is estimated to be \$108 per SWU.

Plans for new technology deployment are proceeding. Louisiana Energy Services (LES) has announced its plans to build a new 3 million SWU per year uranium enrichment plant, the National Enrichment Facility, in Eunice, New Mexico, using Urenco gas centrifuge technology. It expects to bring the new plant into operation beginning in 2008 and to achieve full capacity in 2013. LES filed a commercial plant license application with the Nuclear Regulatory Commission in December 2003.

USEC has also announced its plans to deploy a new 3.5 million SWU per year gas centrifuge uranium enrichment plant by the end of 2010. On August 23, 2004, USEC submitted a license application to the Nuclear Regulatory Commission to build and operate its American Centrifuge Plant in Piketon, Ohio.

In addition, Eurodif has announced plans to replace its existing uranium enrichment plant with a new 7.5 million SWU per year plant that also utilizes Urenco's gas centrifuge machines. The new plant, which is expected to begin operation in 2007 and achieve full production by 2016, will be located in Tricastin, France, at the site of the existing enrichment plant.

In conclusion, the uranium enrichment market in 2004 remained stable with supply and demand in equilibrium and prices constant at the \$108 to \$110 per SWU level. The HEU Agreement deliveries remain very important to the enrichment industry as it accounts for approximately 46 percent of U.S. demand.

Actions Taken to Avoid Potential Impacts to the Nuclear Fuel Industry

Recognizing the vital importance of the nuclear fuel cycle to U.S. energy and national security, Congress, the Department, and industry have worked diligently to help avoid the impacts of the HEU Agreement deliveries upon commercial nuclear fuel markets. Actions taken include:

- ➤ Congress provided, under the USEC Privatization Act, a graduated level of quotas that allowed the natural uranium component of the HEU Agreement to enter into the U.S. market in a measured and stable manner.
- ➤ The USEC Privatization Act also provided for the purchase and transfer of the 1995 and 1996 natural uranium component of the HEU Agreement deliveries to the Department. The Department has responsibly managed the uranium to avoid adverse impacts to the market.
- ➤ Congress provided the authority and funding for the Department to purchase and hold until April 2009, the 1997 and 1998 natural uranium component of the HEU Agreement deliveries to avoid oversupplying the uranium and conversion markets.
- Russia and the Western Consortium have successfully implemented the Commercial Feed Agreement to ensure the reliable and stable supply of uranium and conversion into the market.
- ➤ USEC has ensured the successful introduction of the enrichment services component of the HEU into the U.S. market under existing contracts to avoid adverse market impacts.
- ➤ The U.S. and Russian Governments actively monitor the progress of the HEU Agreement and the Commercial Feed Agreements as well as proposed amendments to help ensure avoidance of market impacts.

Conclusion

Successful implementation of the HEU Agreement remains a high priority of the U.S. Government and is a key element of U.S. nonproliferation policy as well as serving U.S. and Russian commercial interests. This year's report continues to show that the HEU Agreement deliveries are an increasingly important source of supply in meeting U.S. utility uranium, conversion and enrichment requirements. With higher market prices and declining supply from secondary markets, the HEU Agreement deliveries helped ensure adequate supply at reasonable prices.

While the initial HEU Agreement deliveries had limited effects on the commercial nuclear fuel markets, mitigating actions taken by DOE and Congress to avoid adverse impacts from the HEU Agreement deliveries have worked. Successful implementation of the HEU Agreement to date is also a tribute to the dedicated effort of the U.S. and Russian Executive Agents and the industry. Recognizing the vital importance of the nuclear fuel cycle to U.S. energy and national security; the Department will continue to work with Congress and industry to ensure the HEU Agreement's continued success.

HEU Report Glossary

blending or down blend – The term used to describe the process whereby highly enriched uranium is mixed with depleted, natural, or low enriched uranium to create low enriched uranium. For example, one ton of highly enriched uranium can be mixed or blended with approximately 30 tons of natural or low enriched uranium to create 31 tons of commercial grade low enriched uranium.

Cameco – A Canadian company that is the world's largest supplier of uranium and one of the largest suppliers of uranium conversion services. Cameco is one of the three members of the Western Consortium under the Commercial Feed Agreement.

COGEMA – A French company owned by Areva that is active in all phases of the nuclear fuel cycle including uranium enrichment production. Cogema is one of the members of the Western Consortium under the Commercial Feed Agreement.

Commercial Feed Agreement – An agreement between members of the Western Consortium and Russia whereby the natural uranium feed component associated with the Russian LEU delivered under the HEU Agreement after 1998 is purchased for resale in the commercial uranium market. Sales of this natural uranium in the United States is subject to quotas set forth in the USEC Privatization Act.

conversion – The process whereby natural uranium in the form of an oxide is converted to uranium hexafluoride (see uranium hexafluoride or UF₆) gas.

depleted uranium – Uranium whose content of the fissile isotope uranium-235 is less than the 0.7 percent (by weight) found in natural uranium, so that it contains more uranium-238 than found in natural uranium.

enriched uranium – Uranium whose content of the fissile isotope uranium-235 is greater than the 0.7 percent (by weight) found in natural uranium. (See uranium, natural uranium, and highly enriched uranium.)

Executive Agent – Under the HEU Agreement, these are the commercial companies responsible for implementing the HEU Agreement on behalf of the U.S. (USEC) and Russia (Tenex) Governments.

fissile material – Any material fissionable by thermal (slow) neutrons. The three primary fissile materials are uranium-233, uranium-235, and plutonium-239.

gas centrifuge - A uranium enrichment process that uses centrifuges to spin uranium hexafluoride in gaseous form at high speeds and separate uranium-235 isotopes from the uranium-238 isotopes based on their difference in atomic weight.

gaseous diffusion – A uranium enrichment process where uranium hexafluoride in gaseous form is forced through a series of membranes to increase the concentration of uranium-235 isotopes.

highly enriched uranium or HEU – Uranium whose content of the fissile isotope uranium-235 has been increased through enrichment to 20 percent or more (by weight). (See natural uranium

component, enriched uranium, and depleted uranium.) The Russian HEU that is down blended under the HEU Agreement has an enrichment level of above 90 percent uranium-235.

kgU – Kilograms of uranium.

long-term price – In the context of this report, refers to the price paid for nuclear fuel materials and services that will be delivered more than one year after the contract is signed.

low-enriched uranium or LEU – Uranium whose content of the fissile isotope uranium-235 has been increased through enrichment to more than 0.7 percent but less than 20 percent by weight. Most nuclear power reactor fuel contains low-enriched uranium containing 3 to 5 percent uranium-235.

MTU – Metric tons of uranium.

natural uranium component – The feed material provided to a uranium enricher for producing enriched uranium and uranium tails. The natural uranium feed component consists of U_3O_8 from the mining industry and U_3O_8 to UF_6 conversion.

Nuclear Regulatory Commission – The federal agency responsible for licensing and regulation of nuclear safety, safeguards and security of commercial nuclear facilities.

Paducah Gaseous Diffusion Plant – The only remaining operating uranium enrichment plant in the United States, located in Paducah, Kentucky.

Portsmouth Gaseous Diffusion Plant – A shutdown uranium enrichment plant maintained in cold standby and located in Piketon, Ohio.

Privatization Act - On April 26, 1996, the USEC Privatization Act, Public Law 104-134 (42 U.S.C. 2297h) was enacted.

RWE Nukem – A German company that is a trader of uranium and other nuclear fuel supply materials and services in the international market. RWE Nukem is one of the members of the Western Consortium under the Commercial Feed Agreement.

separative work units or SWU – The unit of measurement for the effort needed to enrich uranium.

spot market price or spot price – In the context of this report, refers to the price paid for nuclear fuel materials and services delivered within 6 months of the purchase date.

tails – Refers to depleted uranium produced during the uranium enrichment process.

Tenex – Joint Stock Company Techsnabexsport – a company that is wholly owned by the Russian Government and controlled by the Federal Atomic Energy Agency, Russian Federation, that acts as Russia's executive agent on the HEU Agreement.

uranium – A radioactive, metallic element with the atomic number 92; one of the heaviest naturally occurring elements. Uranium has 14 known isotopes, of which uranium-238 is the most abundant in nature. Uranium-235 is commonly used as a fuel for nuclear fission. (See natural uranium, enriched uranium, highly enriched uranium, and depleted uranium.)

uranium hexafluoride or UF6 – The form of uranium that is the end product of the uranium conversion process. The UF6 can then be fed through a uranium enrichment process, either diffusion or centrifuge.

United States Enrichment Corporation (USEC) – Currently the only enricher of uranium operating in the United States and operator of the Paducah Gaseous Diffusion Plant. USEC is also the U.S. executive agent on the HEU Agreement. USEC, which was formerly a wholly owned government corporation, was privatized as a result of the USEC Privatization Act of 1996.

Western Consortium – A group of three Western uranium suppliers (Cameco, COGEMA, RWE Nukem) that has signed an agreement with Russia to buy and then market the natural uranium associated with the HEU Agreement that remains in the U.S. under the Commercial Feed Agreement.